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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,322	02/02/2001	Phillip Thomas Corvino	LUC-297/Corvino 1-7-1-24-	9329
32205	7590	06/16/2004	EXAMINER NGUYEN, ALAN V	
PATTI & BRILL ONE NORTH LASALLE STREET 44TH FLOOR CHICAGO, IL 60602			ART UNIT 2662	PAPER NUMBER 6
DATE MAILED: 06/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/776,322

Applicant(s)

CORVINO ET AL.

Examiner

Alan Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:

On page 1 lines 4-13, the data on the related and incorporated cases should be updated.

### *Drawings*

2. The drawings were received on 17 April 2001.

The drawings are objected to because in figure 2 element 220, and figure 3 element 224 "gage" should be changed to -- gauge --.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112, 2<sup>nd</sup> paragraph*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "splitter" in claims 1-8, and 10-20 is used by the claim to mean "a

device used output a filtered signal and a bypassed signal from an input signal", while the accepted meaning is "a device used to output one or more filtered signals from an input signal". The term is indefinite because the specification does not clearly redefine the term.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-6, 9, 11, 13-16, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Swam (US 6,728,367).

Regarding **claims 1 and 11**, Swam discloses a method and system comprising a splitter that is locatable at a central office that comprises a plurality of lines (**figure 1 shows a splitter 24 in the central office; It is known in the art that a system as shown in figure 1 resides in a central office; for example col 1 lines 55-58 and col 7 lines 1-5 discloses the splitter as part of the Central Office terminating equipment that sends voice and data signals to the home or office**);

where the splitter is configured to be connectable with a subset of the plurality of lines on a one-to-one basis between the splitter and the subset of the plurality of lines

**(Splitter 24 receives an incoming line 34 and outputs voice line 40 and data line 38, with each line having a separate, direct connection to splitter 24; figure 1).**

Regarding **claims 3 and 13** Swam discloses where the subset of the plurality of lines comprises a first line **(voice/data line 34)** and a second line **(voice line 40)**, where the first line is different from the second line, where the first line comprises a plain old telephone service and asymmetric digital subscriber line, where the second line comprises a plain old telephone service line; and where the splitter is configured to be connectable with the first line and the second line as an individual unit in the central office, where the individual unit comprises the splitter, the first line, and the second line **(figure 1 shows a first line 34 containing a POTS and ADSL signal and a second line 40 containing a POTS signal; for example see col 4 lines 47-65).**

Regarding **claims 4 and 14** Swam discloses where the central office comprises a switch **(switch 28)** and a main distribution frame **(MDF 22)**, where the switch is coupled with a first line of the subset of the plurality of lines, where the main distribution frame is coupled with a second line of the subset of the plurality of lines, where the first line is different from the second line; and where the splitter is configured to be connectable with the first line and the second line without employment of a splitter shelf **(figure 1 shows a main distribution frame 22 and a voice switch 28, where the switch 28 is connected to a first lines 40 and the a main distribution frame 22 is connected to a second line 34).**

Regarding **claims 5 and 15** Swam discloses where the switch comprises a plain old telephone service interface circuit (**voice switch 28 receives Aiken POTS signal from the low-pass filter of the splitter 24, therefore voice switch 28 must contain an interface circuit for the POTS signal; see col 5 lines 28-35**), where the central office comprises a digital subscriber line multiplexor (**DSLAM 26; figure 1**), where the digital subscriber line multiplexor is coupled with a third line of the subset of the plurality of lines (**DSLAM 26 is coupled to a data line 38**), where the first line is different from the third line, where the second line is different from the third line; and where the splitter is configured to be connectable with the first line, the second line, and the third line without employment of a splitter shelf (**splitter 24 is connected to all three lines on a one-to-one basis**).

Regarding **claims 6 and 16** Swam discloses where the subset of the plurality of lines comprises a first line (**voice/data line 34**) and a second line (**voice line 40**), where the first line is different from the second line, where the first line comprises a plain old telephone service and asymmetric digital subscriber line (**incoming line 34 contains both a POTS and ADSL signal**), where the second line comprises a plain old telephone service line (**line 40 contains a POTS signal; col 5 lines 28-35**); where the splitter comprises a low-pass filter, and where plain old telephone service is obtainable through connection of the low-pass filter with the first line and the second line

**(composite filter circuit 30 contains a low-pass filter that extracts a POTS signal from the mixed POTS/ADSL signal; col 5 lines 36-55).**

Regarding **claims 9 and 19** Swam discloses where the central office comprises a local telephone company switching center **(the voice switch 28, DSLAM 26, MDF 22, splitter 24, and the plurality of voice and data lines of figure 1 make up a telephone switching center).**

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swam in view of McNamara et al (US 5,974,139) hereafter McNamara.

Regarding **claims 2 and 12** Swam discloses where the subset of the plurality of lines comprises a first line, a second line, and a third line;

Swam discloses where the first line is different from the second line, where the first line is different from the third line, where the second line is different from the third line **(figure 1 shows a voice line, a data line and a mixed voice/data line with each line having a one-to-one connection with splitter 24);**

Swam discloses where the first line comprises a plain old telephone service and asymmetric digital subscriber line (**mixed voice/data line 34; the voice signal is a POTS signal and the data signal is an ADSL signal; col 4 lines 58-64**), where the second line comprises a plain old telephone service line (**voice line 40; see col 5 lines 28-35**); and

Swam discloses where the splitter is configured to be connectable with the first line, the second line, and the third line as an individual unit in the central office, where the individual unit comprises the splitter, the first line, the second line, and the third line (**figure 1 shows a voice line, a data line and a mixed voice/data line with each line having a one-to-one connection with splitter 24**).

Swam fails to expressly disclose where the third line comprises a plain old telephone service and asymmetric digital subscriber line.

McNamara discloses telephone system that has a low pass filter for obtaining a POTS signal, and has a bypass path for carrying unfiltered ADSL and POTS signals to and from the central office (**see col 1 lines 52-60 and col 7 lines 57-67; figure 4 shows a low pass filter 80 to obtain the POTS signal and a bypass path 75 to retain the mixed ADSL/POTS signal**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Swam's apparatus to utilize a splitter that outputs a voice line and a mixed data/voice line, as taught by McNamara. The motivation is a more efficient system where homes that utilize both ADSL and plain old telephone service can send and receive mixed data/signal from the central office.



9. Claims 7, 8, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swam in view of Guenther et al (US 6,438,226) hereafter Guenther.

Regarding **claims 7 and 17** Swam discloses where the central office comprises a main distribution frame (**figure 1 includes a main distribution frame 22; col 4 lines 47-57**). Regarding **claims 8 and 18** Swam discloses where the plurality of lines comprise a particular line that is different from every line of the subset of the plurality of lines (**figure 1 shows a voice line, a data line and a mixed voice/data line with each line having a one-to-one connection with splitter 24**).

Swam fails to expressly disclose where main distribution frame comprises a plurality of wire wrap terminals; and where the splitter is configured to be mountable on a pair of wire wrap terminals of the plurality of wire wrap terminals, allowing the splitter to be installable on the subset of the plurality of lines without interruption of plain old telephone service on the particular line.

Guenther discloses a splitter assembly for a main distribution frame, with the distribution frame having a plurality of terminals each with wire wrap connections to prevent POTS interruptions the cross-connect field of the main distribution frame (**see col 2 lines 15-25 and col 4 lines 50-67**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Swam's apparatus to utilize a main distribution frame having a plurality of wire wrap terminals for the mounting of the splitter lines, as taught by Guenther. The motivation is a system that preserves cabinet space, reduces wire

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clutter and eliminates POTS signal backtracking to the modem, as explained by Guenther on column 2 lines 15-25.

10. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swam in view of Bingel et al (US 6,744,883) hereafter Bingel.

Regarding **claims 10 and 20** Swam discloses where a line of the subset of the plurality of lines (**figure 1 shows a voice line, a data line and a mixed voice/data line**).

Swam fails to expressly disclose where the plurality of lines is convertible from a plain old telephone service line to a plain old telephone service and asymmetric digital subscriber line on a basis of an individual unit that comprises the splitter and the subset of the plurality of lines.

Bingel discloses an xDSL/POTS splitter in the Central office that implements the use of bi-directional communication. In figure 1 the POTS splitters 145a, 145b, 145c, and 145d are used to combine and split POTS and xDSL signals (**see col 10 lines 14-34**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Swam's apparatus to be able to combine the signals to attain the mixed voice/data signal, as taught by Bingel. The motivation is a system that decreases the physical complexity of telephone systems by using bi-directional communication using the same splitters and cables for upstream and downstream communication as explained by Bingel on column 1 lines 25-40.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to show the state of the art with respect to POTS/ADSL splitters:

US Patent (6,608,842) to Michaels

US Patent (6,738,470) to Aronovitz

US Patent (6,574,309) to Chea et al

US Patent (6,470,074) to Teixeira

US Patent (6,449,362) to Tennyson et al

US Patent (6,393,110) to Price

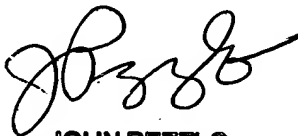
US Patent (5,991,311) to Long et al

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Nguyen whose telephone number is 703-305-0369. The examiner can normally be reached on 9am-6pm ET, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AVN  
June 4, 2004



**JOHN PEZZLO**  
**PRIMARY EXAMINER**